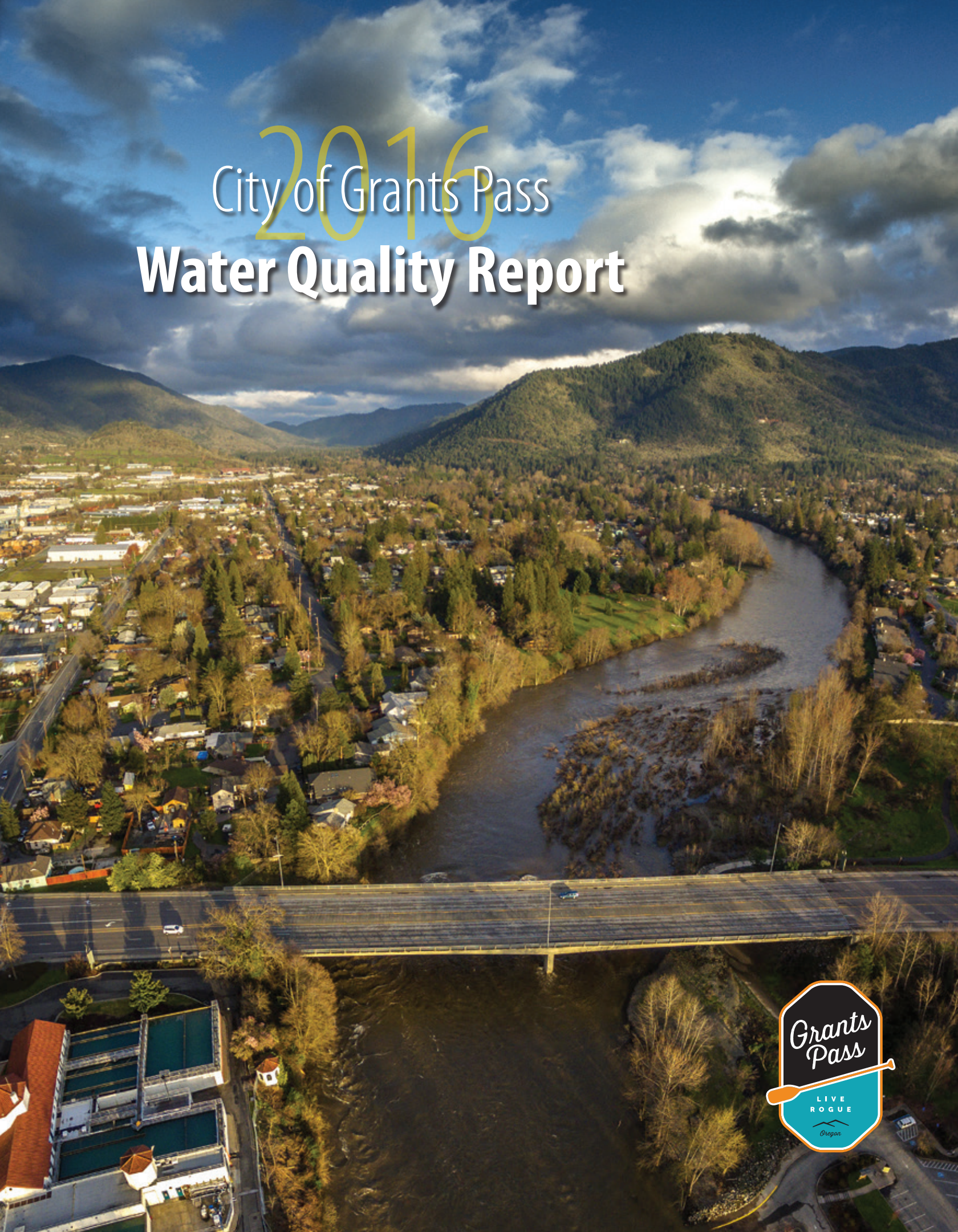
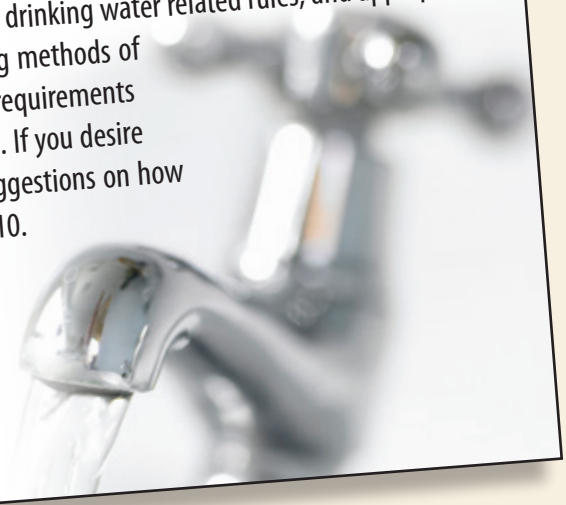

2016
City of Grants Pass
Water Quality Report
Grants Pass
LIVE
ROGUE
Oregon

Dear Water Customer,

As the purveyor of potable water to the citizens of Grants Pass, we are required by the Environmental Protection Agency to prepare and distribute a brief annual water quality report summarizing information regarding the source of the water, any detected contaminants in the water, compliance with drinking water related rules, and appropriate educational information. The City of Grants Pass is constantly pursuing methods of water treatment, distribution and planning that meet all the regulatory requirements while maintaining an affordable cost all while planning for the future. If you desire any additional information regarding the City's water or have any suggestions on how we can better serve you, please feel free to contact me at 541-450-6110.

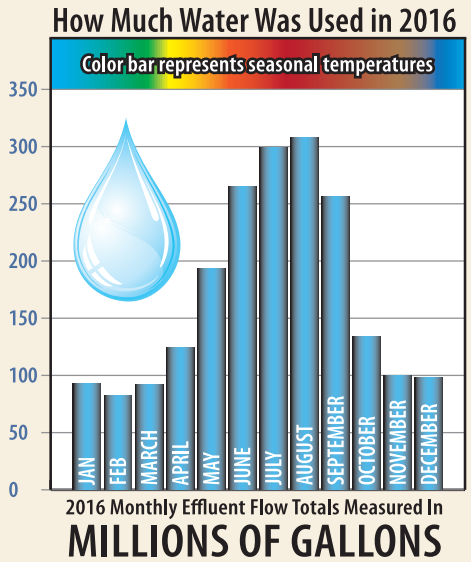


Respectfully yours,

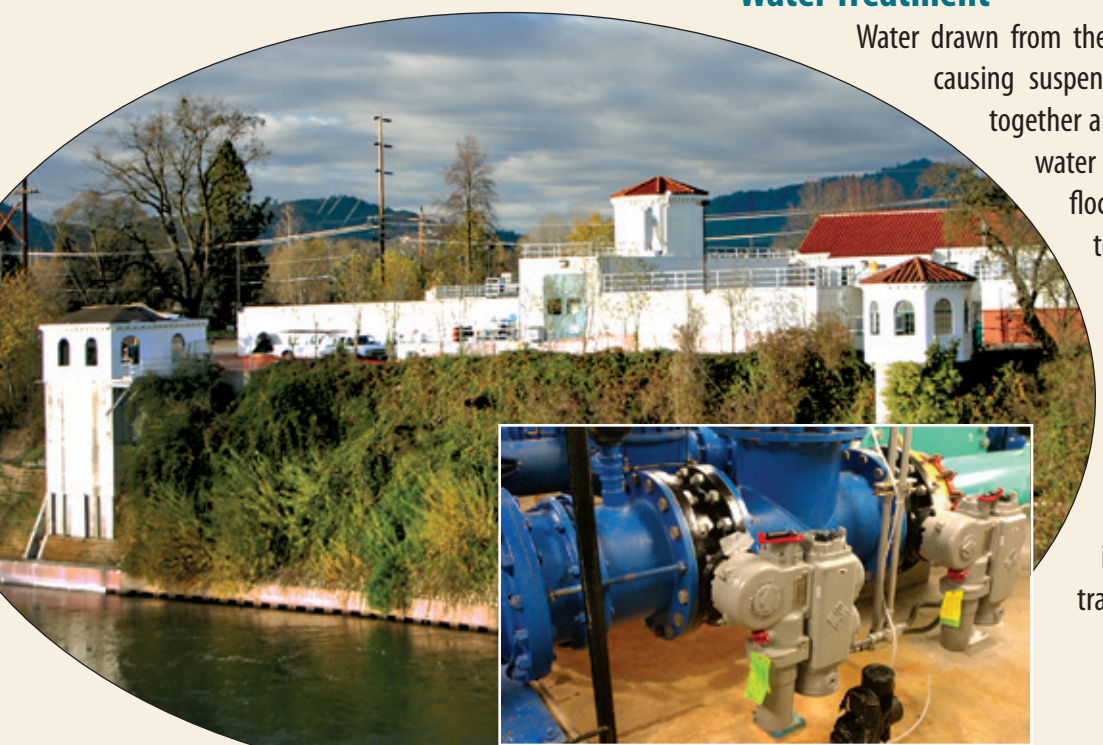
Jason M. Canady, Public Works Director

Source of Supply

Our water source is surface water drawn from the Rogue River. The Rogue River has supplied the City of Grants Pass with its drinking water since 1888. From 1888 to 1930 water was pumped from the Rogue River and chlorinated to kill bacteria; however it was not filtered. At certain times of the year the drinking water was very turbid. There was a definite need for filtration to make the water a clear and pleasant tasting commodity. During the period from the 1930's to 1983 the Water Treatment Plant (WTP) expanded to our present capacity of 20 million gallons per day. Depending on the time of year and customer demand, the Water Treatment Plant presently produces between 2.0 and 14.92 million gallons per day. In 2016, the City distributed over 2.046 billion gallons of water.



Water Treatment



Water drawn from the Rogue River is mixed with coagulant causing suspended materials in the water to clump together and form larger particles called "floc". The water enters sedimentation basins, where the floc (which is heavier than water) settles to the bottom of the tanks. The water then flows from the sedimentation basins into dual-media filters. The filters remove any remaining particles present in the water.

In the final step, chlorine is added to the water for disinfection and to keep it safe in the distribution system as it travels to a reservoir and on to your tap.

Plant operators are certified by the Oregon Health Authority Drinking Water Program (OHA-DWP) and are trained in all aspects of water treatment. They are required to complete continuing education classes in order to maintain their certification and to keep up to date on the latest standards and technology used in water treatment. We are pleased to report that the water we distribute is safe and meets all Federal and State requirements.

Storage and Distribution

Treated water piped from the plant is pumped and stored by thirteen remote pumping stations and eight reservoirs. The distribution system is made up of five different elevation zones located throughout the city and over 160 miles of distribution lines varying in size from 2 to 36 inches in diameter. Liquid chlorine is added at strategic points in the distribution system to maintain the chlorine residual mandated by the OHA-DWP.

Monitoring and Reporting Requirements

The Grants Pass Water Treatment Plant routinely monitors for contaminants in our water according to Federal and State laws. The data within this report comes from the monitoring of our potable water supply for the period of January 1, 2016 to December 31, 2016. All water, including bottled drinking water, may reasonably be expected to contain at least small amounts of some contaminants. It's important to remember that the presence of these contaminants does not necessarily pose a health risk.

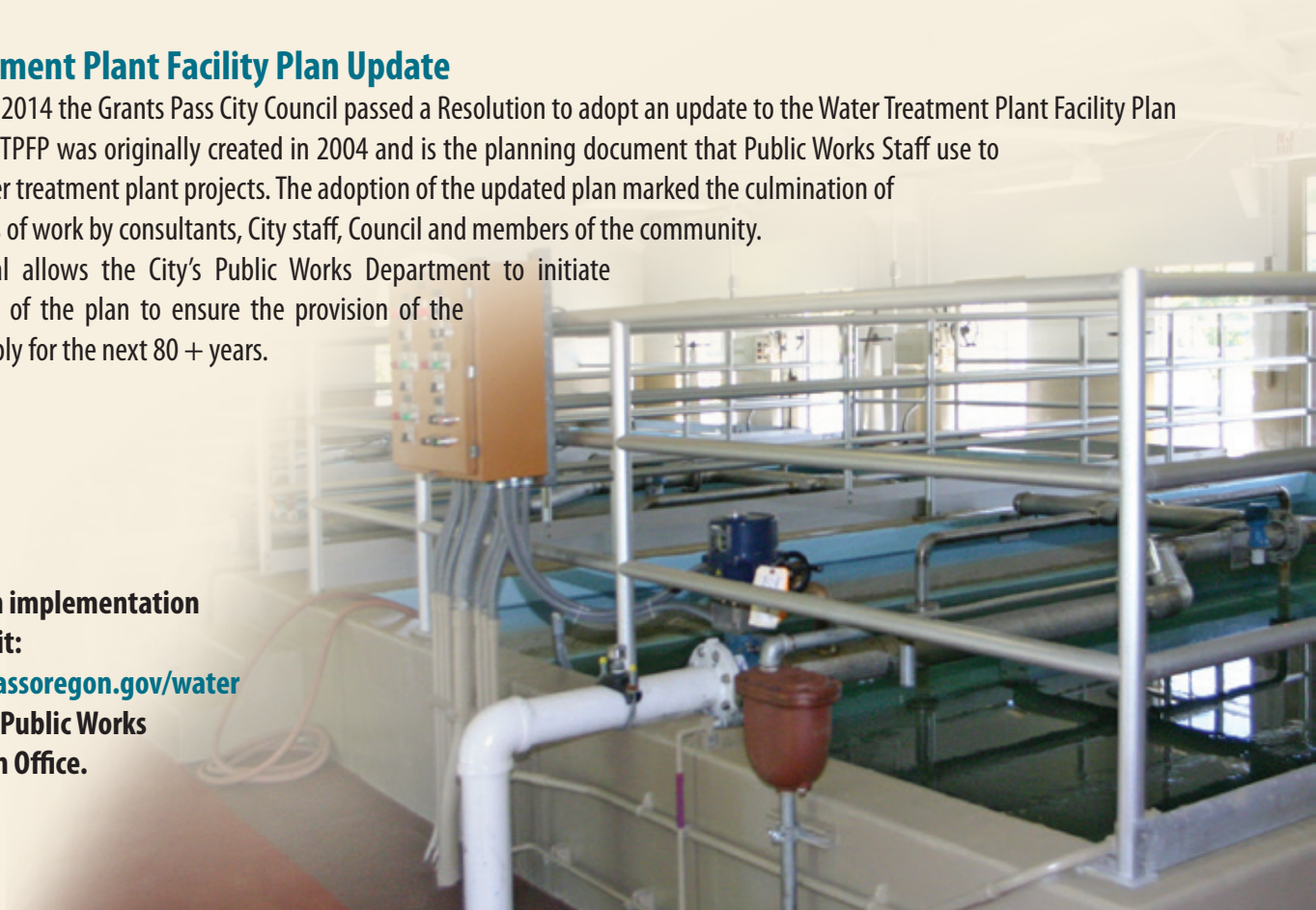
Federal and State regulations include procedures and schedules for monitoring water from the source to the tap. The OHA-DWP ensures that public water systems in Oregon comply with these regulations, follow monitoring schedules, and report monitoring results. The Grants Pass Water Treatment Plant and Distribution Department work hard to provide the highest quality water to every tap.

Source Water Assessment

A source water assessment was completed for the City in March of 2003. This report can be viewed at the City's website at www.grantspassoregon.gov/water-documents or a hard copy can be viewed at the Public Works Office at 101 NW A St. or the Josephine County Library in Grants Pass. If you would like a summary of the report mailed to you, contact the Public Works Office at 541-450-6110. The Rogue River is the center piece of our community and we ask that all of our customers help us to protect this valuable resource.

Water Treatment Plant Facility Plan Update

On February 19, 2014 the Grants Pass City Council passed a Resolution to adopt an update to the Water Treatment Plant Facility Plan (WTPFP). The WTPFP was originally created in 2004 and is the planning document that Public Works Staff use to plan future water treatment plant projects. The adoption of the updated plan marked the culmination of nearly two years of work by consultants, City staff, Council and members of the community. Council approval allows the City's Public Works Department to initiate implementation of the plan to ensure the provision of the City's water supply for the next 80 + years.



For updates on implementation of the Plan visit: www.grantspassoregon.gov/water or contact the Public Works Administration Office.

Results of Lead and Copper Analysis – Sept 2014				
Variable	**90th Percentile**	**Action Level* (AL)**	**Complies?**	**Typical Source**
Copper	0.2 ppm	90% of the homes tested must have levels less than 1.3 ppm of Copper and 15 ppb of Lead	Yes No samples exceeded the Action Level	Corrosion of household plumbing;
Lead	5.2 ppb		Yes One (1) sample exceeded the Action Level	Erosion of natural deposits

*** Action Levels.**

The concentration of a contaminate which, if exceeded, triggers treatment or other requirements that a water system must follow.

NOTES: Plumbing components may contribute to elevated lead and copper at the tap. There is no detectable lead in Grants Pass water supply sources. Copper occurs naturally at very low levels. Some homes and buildings may have elevated lead levels at the tap if water stands in the pipes for several hours. Lead may leach from faucets or plumbing components. Leaching may also occur in copper pipes that are joined with lead-based solder. The lead and copper results reported here are from a targeted group of homes in Grants Pass retail and wholesale service area. This group of homes meets criteria for being at risk of having elevated levels of lead and copper at the tap.

If present, elevated levels of lead can cause serious health problems, especially for pregnant women and young children. Lead in drinking water is primarily from materials and components associated with service lines and home plumbing. The Grants Pass Water Treatment Plant is responsible for providing high quality drinking water, but cannot control the variety of materials used in plumbing components. When your water has been sitting for several hours, you can minimize the potential for lead exposure by flushing your tap for 30 seconds to 2 minutes before using water for drinking or cooking. If you are concerned about lead in your water, you may wish to have your water tested. Information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available from the Safe Drinking Water Hotline or at www.epa.gov/safewater/lead.

A Note About Lead in Drinking Water

In light of the media spotlight on the crisis in Flint Michigan, the City wanted to make a statement about the potential for lead to be found in your drinking water. While we cannot speak directly to all of the events in Flint, our thoughts are with all those facing this crisis and our wishes are for a speedy recovery.

Lead in drinking water can pose a very real health threat and as such we want to assure our customers that we take this issue very seriously. We monitor for lead and copper at our customers taps at the prescribed intervals and analyze that data carefully to ensure that levels fall well below regulated levels.

It is important to note that most lead in drinking water actually comes from the homeowners own plumbing where it can be leached from the pipes and plumbing fixtures. Very old homes and very new homes are most susceptible to this leaching. With recent changes to the amount of allowable lead which can be found in plumbing fixtures we will continue to see a decrease in lead across the nation. If you would like to examine the City's results for lead and copper they can be found at the following address: https://yourwater.oregon.gov/leadcopper.php?pwsno=00342.

The City's water is fairly soft which means that it is non-corrosive minimizing its effect on your plumbing fixtures. Additionally, the City has never used lead service lines which are one of the primary issues in Flint Michigan. If you would like additional information about lead in the drinking water the American Water Works Association has put together a website to educate consumers about what can be found in their water: http://www.drinktap.org/water-info/whats-in-my-water/lead-in-water.aspx.

Do not hesitate to contact the City if you have any questions about lead in your water or any other result that you find in this report. We want you to know what is in your water and will always take the time to answer any question that you may have.

To continue high standards of water quality, we must plan for our future.

The Water Treatment Plant has faithfully served the Grants Pass residents for the past 86 years. Turn on a tap, and out comes an unending supply of good, safe drinking water. The water currently produced by the Treatment Plant is of the highest quality. However, ensuring reliable delivery of water to our community is becoming incrementally more challenging.

Unfortunately, our Water Treatment Plant is failing. The main building was constructed in 1931, long before the building codes and seismic requirements of today. Walls are crumbling; structures are no longer sound. If we were to have a large seismic event, the citizens of Grants Pass would no longer have access to the fresh, clean, safe water the Treatment Plant currently provides.

Over the past 5 years, the City has contracted with several specialized engineering firms to assess the facility's current condition. We have also evaluated the potential plant condition following a catastrophic failure due to a large seismic event. All firms have found fault in the current structure, and have concluded there is a very high likelihood of building and supply damage. This aging facility is beyond a simple repair. Being our only source for treating and supplying drinking water, it would not be a responsible decision to continue patching our current Water Treatment Plant.

After gathering and analyzing all of this information, the decision was made to pursue the construction of a new Water Treatment Facility. This will ensure an uninterrupted supply of water to our community for a very long time.

Photos show delamination and loss of integrity of walls and water bearing structures and roof patches.

Results of Turbidity and Microbiological Analysis of Treated Water After Disinfection

(All results meet State and Federal drinking water regulations)

Variable	Maximum Amount Found	Maximum Contaminant Level (MCL)	Maximum Contaminant Level Goal (MCLG)	Typical Source	Meets Regulations
Physical Testing Characteristic Turbidity	0.09 NTU 0.02 NTU Yearly Daily Average	A violation exists if > 5% of samples are > 0.30 NTU	n/a	Soil erosion and stream sediment	Yes
Microbiological Testing Total Coliform Bacteria	Zero positive tests	5% or more samples test positive	Zero positive tests	Soil bacteria and animal feces	Yes
Disinfection Residual	1.23 ppm Range 1.1 ppm - 1.3 ppm	MRDL = 4.0 ppm	MRDLG = 4.0 ppm	Chlorine is used as a disinfectant in the water treatment process	Yes

NOTES:

Turbidity and NTU's.
Turbidity is regulated because it can provide a medium for bacterial growth. Turbidity is measured in NTU's. The Water Treatment Plant consistently delivers water that is well under Federal and State standards.

Total Coliform Bacteria.
Testing for these bacteria after disinfection helps confirm the effectiveness of the disinfection process. (Bacteria may have been present in the source water.) Total coliform bacteria are also indicators of possible contamination that might occur after treatment.

Chlorine Residual. Federal and State drinking water regulations require detectable disinfectant residual (chlorine) throughout our water distribution system. Water entering the Grants Pass distribution system has approximately 1.2 part per million of chlorine.

Rogue River Turbidity (2016 Averages)

Summer Daily Average	2.2	NTU's
Winter Daily Average	15.8	NTU's
Maximum Daily Average	353	NTU's

Production Data (2016 Averages - million gallons per day)

Summer Daily Average	9.2376	MGD
Winter Daily Average	3.0284	MGD
Maximum Daily Flow	13.5523	MGD

Unregulated Contaminant Monitoring

Substance	Location	Average Result (ppb)	Range of Results (ppb)	Complies	Typical Source
Chromium 6	Rogue River Water	0.0998	0.068 – 0.133	Not Regulated	Erosion of Natural Deposits
	End of Distribution System	0.298	0.250 – 0.359		
Chlorate	Rogue River Water	285	180 – 390	Not Regulated	By-product of Disinfection
	End of Distribution System	455	380 – 530		
Strontium	Rogue River Water	80	73 – 87	Not Regulated	Erosion of Natural Deposits
	End of Distribution System	84.5	80 – 89		
Vanadium	Rogue River Water	1.6	1.2 – 2.0	Not Regulated	Erosion of Natural Deposits
	End of Distribution System	1.7	1.7 – 1.7		

NOTES:

Unregulated Contaminants are those that don't yet have a drinking water standard set by the USEPA. The purpose of monitoring for these contaminants is to help EPA decide whether the contaminants should have a standard.

Results of Disinfection By-Product Analysis

(All results meet State and Federal drinking water regulations)

Substance	Location	Average Result (ppb)	Range of Results (ppb)	Maximum Contaminant Level (MCL)	Maximum Contaminant Level Goal (MCLG)	Source of Contaminant	Complies
Total Trihalomethanes (TTHM's)	New Hope Pump Station	36.0	27.9 – 45.4	Running Annual Average <80 ppb	Zero ppb	By-products of chlorination used in the water treatment process	Yes
	Forest View Drive	44.2	37.1 – 52.6				
	Starlite Drive	48.2	37.2 – 67.3				
	Merlin Landfill	54.8	49.2 – 61.1				
Haloacetic Acids (HAA5's)	New Hope Pump Station	34.1	23.6 – 53.1	Running Annual Average <60 ppb	Zero ppb	By-products of chlorination used in the water treatment process	Yes
	Forest View Drive	38.8	29.3 – 53.6				
	Starlite Drive	37.0	29.5 – 42.5				
	Merlin Landfill	43.4	32.8 – 55.5				

NOTES: During disinfection, certain by-products form as a chemical reaction between chlorine and naturally occurring organic matter in the water. The disinfection process is carefully controlled so that the disinfection is maintained while keeping the levels of disinfection by-products below regulatory limits.

Some people who drink water containing TTHMs in excess of the MCL over many years may experience problems with their liver, kidneys or central nervous system, and may have an increased risk of getting cancer. Some people who drink water containing haloacetic acids in excess of the MCL over many years may have an increased risk of getting cancer.

Disinfection by-products are monitored quarterly. The results of one quarter are averaged with results of three previous quarters and reported as a running annual average (RAA). One of the Haloacetic Acids (HAA5's) results exceeded the 60 ppb MCL but because the Location Running Annual Average was below the MCL a violation did not occur.

Acronyms and Key Definitions

AL - ***Action Levels.*** The concentration of a contaminante which, if exceeded, triggers treatment or other requirements that a water system must follow.

Contaminant - ***Any substance found in water***. Not all contaminants are harmful.

MCL - ***Maximum Contaminant Level.*** The highest level of a contaminant that is allowed in drinking water. MCLs are set as close to the MCLGs as feasible using the best available treatment technology.

MCLG - ***Maximum Contaminant Level Goal.*** The level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs allow for a margin of safety.

MRDL - ***Maximum Residual Disinfectant Level.*** The highest level of a disinfectant allowed in drinking water. There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants.

MRDLG - ***Maximum Residual Disinfectant Level Goal.*** The level of a drinking water disinfectant below which there is no known or expected risk to health. MRDLGs do not reflect the benefits of the use of disinfectants to control microbial contaminants.

ND@ - ***Not Detected.*** At a particular detection point because laboratory instruments are only able to detect chemicals to certain minimum levels.

NTU - ***Nephelometric Turbidity Unit***. Unit of measure used to describe water clarity. The smaller the number the clearer the water.

ppb - ***Parts per Billion***. A part per billion indicates the amount of a substance in a billion parts of water; this compares with one penny in $10 million.

ppm - ***Parts per Million***. A part per million means that one part of a particular substance is present for every million parts of water; this compares to one penny in $10,000. Similarly, it is the same as 1 mg/l (milligram per liter).

TT – ***Treatment Technique***. A required process intended to reduce the level of a contaminant in drinking water.

Turbidity - ***Turbidity.*** A measure of the cloudiness of the water. We monitor it because it is a good indicator of water quality. High turbidity can hinder the effectiveness of disinfectants.

Frequently Asked Questions

Does the City add fluoride to the water?

No, we do not add fluoride to the water. However, there are low levels of naturally occurring fluoride in the drinking water, at a level which is not beneficial for cavity fighting nor does it present a health hazard.

Why does the taste and odor of my water sometimes differ?

Water naturally varies in taste and odor at different times of the year. Taste and odor problems in your drinking water can come from new or old pipelines, plumbing fixtures or changes in raw water quality.

Is Grants Pass City water soft or hard ?

Grants Pass City water is soft to moderately soft. It ranges from 1.90 to 3.4 grains of hardness per gallon (less than 59 parts per million CaCO3).

What is the pH of the City's water ?

Grants Pass City water after treatment averages 7.3 pH units.

Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised persons such as persons with cancer undergoing chemotherapy, persons who have undergone organ transplants, people with HIV/AIDS or other immune system disorders, some elderly, and infants can be particularly at risk from infections.

These people should seek advice about drinking water from their health care providers. EPA/CDC guidelines on appropriate means to lessen the risk of infection by Cryptosporidium and other microbial contaminants are available from the Safe Drinking Water Hotline (800-426-4791).

More information about contaminants and potential health effects can be obtained by calling the following numbers:

Environmental Protection Agency	Oregon Health Authority	Josephine County	City of Grants Pass
Safe Drinking Water Hotline:	Drinking Water Program:	Public Health:	Public Works Office:
1-800-426-4791	**(971) 673-0405**	**(541) 474-5325**	**(541) 450-6110**

Past reports can be viewed at: www.grantspassoregon.gov/CCR

Report designed by Ben Blankenbaker, Flying Toad Graphics • Aerial photos courtesy of Jasman Mander

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